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LCV-1257

September 28, 1998

Docket No. 50-425

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Ladies and Gentlemen:

VOGTLE ELECTRIC GENERATING PLANT
LICENSEE EVENT REPORT 2-98-008
SLAVE RELAY TESTING LEADS TO TRIPS OF MAIN
FEEDWATER PUMPS AND REACTOR

In accordance with the requirements of 10 CFR 50.73, Southern Nuclear Operating Company hereby submits a Vogtle Electric Generating Plant licensee event report for an event that occurred on Unit 2 on September 4, 1998.

Sincerely,

J. B. Beasley, Jr.

JBB/BHW/gmb

Enclosure: LER 2-98-008

xc: Southern Nuclear Operating Company

Mr. J. T. Gasser

Mr. M. Sheibani

SNC Document Management

U. S. Nuclear Regulatory Commission

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9810070046 980928
PDR ADOCK 05000425
S PDR

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REQUIRED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (T-6 F33), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)

Vogtle Electric Generating Plant - Unit 2

DOCKET NUMBER (2)

05000425

PAGE (3)

1 OF 3

TITLE (4)

SLAVE RELAY TESTING LEADS TO TRIPS OF MAIN FEEDWATER PUMPS AND REACTOR

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER(S)
09	04	98	98	008	00	09	28	98		05000425
OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
1		20.2201(b) 20.2203(a)(2)(v) 50.73(a)(2)(i) 50.73(a)(2)(vii)								
POWER LEVEL (10)		20.2203(a)(1) 20.2203(a)(3)(i) 50.73(a)(2)(ii) 50.73(a)(2)(x)								
100		20.2203(a)(2)(i) 20.2033(a)(3)(ii) 50.73(a)(2)(iii) 73.71								
		20.2203(a)(2)(ii) 20.2033(c)(1) X 50.73(a)(2)(iv) OTHER								
		20.2203(a)(2)(iii) 50.38(c)(1) 50.73(a)(2)(v) Specify in Abstract below								
		20.2203(a)(2)(iv) 50.38(c)(2) 50.73(a)(2)(vii) or in NRC Form 366A								

LICENSEE CONTACT FOR THIS LER (12)

NAME

Mehdi Sheibani, Nuclear Safety and Compliance

TELEPHONE NUMBER (include area code)

AREA CODE

706 826-3209

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	X	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-space typewritten lines) (16)

On September 4, 1998, the balance of plant operator (BOP) was performing solid state protection system (SSPS) slave relay testing. At 0024 EDT, both main feedwater pumps tripped. As steam generator (SG) water levels decreased toward their low level setpoints, the reactor operator (RO) performed a manual reactor trip. The main feedwater system isolated and auxiliary feedwater actuated, as designed. Control room personnel acted appropriately to stabilize the unit in Mode 3 (hot standby).

The causes of this event were: 1) the test circuit contains an inherent design weakness. Simultaneously depressing multiple test lamps allowed additive currents to actuate the relay that trips both main feedwater pumps; 2) the BOP exhibited a poor practice in simultaneously depressing more than one test lamp; and, 3) the test procedure did not contain a caution against simultaneously depressing more than one test lamp. A modification will change the test circuit to prevent feedwater pump tripping due to simultaneous lamp testing. A shift briefing item was initiated to advise operators of this event and the need to avoid simultaneous depressing of the test lamps when conducting this testing. Test procedures have been revised to include a precaution against simultaneous lamp testing.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Vogtle Electric Generating Plant - Unit 2	0 5 0 0 0 4 2 5	9 8	0 0 8	0 0	2	OF	3

TEXT (If more space is required, use additional copies of NRC Form 366A)(17)

A. REQUIREMENT FOR REPORT

This report is required per 10 CFR 50.73 (a)(2)(iv) because an unplanned reactor protection system actuation occurred.

B. UNIT STATUS AT TIME OF EVENT

At the time of this event, Unit 2 was operating in Mode 1 at 100 percent of rated thermal power. Other than that described herein, there was no inoperable equipment that contributed to the occurrence of this event.

C. DESCRIPTION OF EVENT

On September 4, 1998, the balance of plant operator (BOP) was performing solid state protection system (SSPS) slave relay testing. At 0024 EDT, both main feedwater pumps tripped. As steam generator (SG) water levels decreased toward their low level setpoints, the reactor operator (RO) performed a manual reactor trip. The main feedwater system isolated and auxiliary feedwater actuated, as designed. Control room personnel acted appropriately to stabilize the unit in Mode 3 (hot standby). The NRC Operations Center was notified of this event at 0236 EDT.

D. CAUSE OF EVENT

The causes of this event were:

- 1) The test circuit contains an inherent design weakness. The BOP simultaneously depressed test lamps to verify circuit status. By depressing multiple lamps simultaneously, the additive currents from the parallel test lamp circuits were sufficient to actuate the slave relay which trips both main feedwater pumps,
- 2) The BOP exhibited a poor practice in simultaneously depressing more than one test lamp; and,
- 3) The test procedure did not contain a caution against simultaneously depressing more than one test lamp. Plant personnel were not aware of the design weakness and did not caution against simultaneously depressing more than one test lamp in the procedure.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1) Vogtle Electric Generating Plant - Unit 2	DOCKET NUMBER (2) 0 5 0 0 0 4 2 5	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
		9 8	0 0 8	0 0	3	OF	3

TEXT (if more space is required, use additional copies of NRC Form 366A)(17)

E. ANALYSIS OF EVENT

Operators acted appropriately to manually trip the reactor prior to the occurrence of an automatic trip due to SG low water level. The main feedwater system then isolated and auxiliary feedwater actuated as designed to maintain SG water levels. Operators responded as required to transition the unit to stable operation in Mode 3 (hot standby). Based on these considerations, there was no adverse affect on plant safety or on the health and safety of the public as a result of this event.

F. CORRECTIVE ACTIONS

- 1) A modification to change the test circuits to prevent feedwater pump tripping due to simultaneous lamp testing will be completed during refueling outages in Fall 2000 (Unit 1) and Spring 2001 (Unit 2).
- 2) A shift briefing item was initiated to advise operators of this event and the need to avoid simultaneous depressing of the test lamps when conducting this testing.
- 3) Test procedures have been revised to include a precaution against simultaneous lamp testing.
- 4) A broadness review to identify similar conditions in other SSPS test circuits will be completed by November 20, 1998.

G. ADDITIONAL INFORMATION

- 1) Failed Components:
None
- 2) Previous Similar Events:
None
- 3) Energy Industry Identification System Code:
Main Feedwater System - SJ
Auxiliary Feedwater System - BA
Solid State Protection System - JG

CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9810070046 DOC.DATE: 98/09/28 NOTARIZED: NO DOCKET #
FACIL:50-425 Alvin W. Vogtle Nuclear Plant, Unit 2, Georgia Power 05000425
AUTH.NAME AUTHOR AFFILIATION
SHEIRANI,M. Southern Nuclear Operating Co.
BEASLEY,J.B. Southern Nuclear Operating Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 98-008-00:on 980904,slave relay testing leads to trips
of main FW pumps & reactor.Caused by inherent design of test
circuit.Will modify test circuits to prevent FW pump
tripping due to simultaneous lamp testing.With 980928 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 4
TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:Application for permit renewal filed.

05000425G

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